

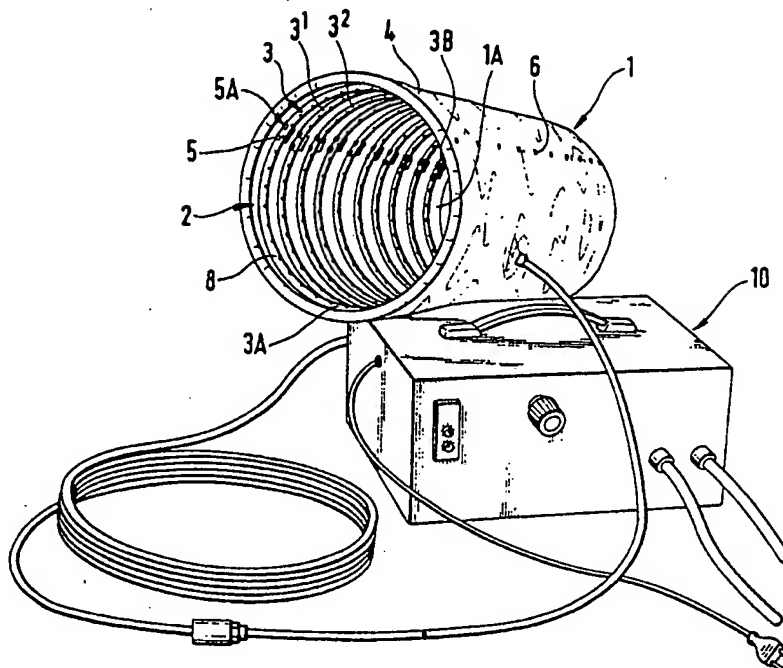


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁴ : A01K 13/00, A47K 3/24	A1	(11) International Publication Number: WO 86/ 01978 (43) International Publication Date: 10 April 1986 (10.04.86)
(21) International Application Number: PCT/SE85/00383 (22) International Filing Date: 7 October 1985 (07.10.85) (31) Priority Application Number: 8405013-7 (32) Priority Date: 8 October 1984 (08.10.84) (33) Priority Country: SE (71) Applicant (for all designated States except US): HYDROTERAPI AB [SE/SE]; Box 61, S-280 60 Broby (SE). (72) Inventor; and (75) Inventor/Applicant (for US only) : LÖFGREN, Torbjörn [SE/US]; 5295 N.E. 20th Avenue, Ft. Lauderdale, FL 33308 (US). (74) Agent: LINDBERG, Bo; Cederbom & Lindberg AB, Box 53252, S-400 16 Göteborg (SE).		(81) Designated States: AT (European patent), AU, BE (European patent), CH, CH (European patent), DE, DE (Utility model), DE (European patent), DK, FI, FR (European patent), GB, GB (European patent), IT (European patent), JP, LU, LU (European patent), NL, NL (European patent), NO, SE (European patent), US. Published <i>With international search report.</i> <i>In English translation (filed in Swedish).</i>

(54) Title: ARRANGEMENT FOR A SHOWER SPACE**(57) Abstract**

Arrangement for a shower space (1) which forms part of an installation (10) intended for shower purposes. The arrangement makes it possible, amongst other things, for the space (1) easily and reliably to enclose the desired parts of the body of those animals or persons who intend to make use of the installation (10). A shower fluid supply hose (3) arranged in the form of a coil, which is so shaped as to encircle a long shower space (1) which is hollow at its centre, and which along its length has a number of fluid discharge openings (8), is so arranged, thanks to the elastic capacity of the hose, as to be capable of being collapsed from an extended, so called 'shower position' to a compact, so-called 'packed-up position', and is in particular capable of being connected to an installation (10) intended for pulsed showering with alternately hot and cold fluid.



FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AT	Austria	GA	Gabon	MR	Mauritania
AU	Australia	GB	United Kingdom	MW	Malawi
BB	Barbados	HU	Hungary	NL	Netherlands
BE	Belgium	IT	Italy	NO	Norway
BG	Bulgaria	JP	Japan	RO	Romania
BR	Brazil	KP	Democratic People's Republic of Korea	SD	Sudan
CF	Central African Republic	KR	Republic of Korea	SE	Sweden
CG	Congo	LI	Liechtenstein	SN	Senegal
CH	Switzerland	LK	Sri Lanka	SU	Soviet Union
CM	Cameroon	LU	Luxembourg	TD	Chad
DE	Germany, Federal Republic of	MC	Monaco	TG	Togo
DK	Denmark	MG	Madagascar	US	United States of America
FI	Finland	ML	Mali		
FR	France				

Arrangement for a shower space

The present invention relates to an arrangement for a shower space which forms part of an installation intended for shower purposes.

The principal object of the present invention is primarily to provide an arrangement of the kind indicated above which is capable rapidly, effectively and above all reliably of being used for showering the legs of horses and other animals, without encountering difficulty in conjunction with the insertion and removal of the intended object to be showered respectively into and from the shower space in question, but which is naturally also capable of being applied to humans and the various parts of their bodies, such as arms and legs.

Said object is achieved by means of an arrangement such as that proposed in accordance with the present invention, which is characterized essentially in that a shower fluid supply hose arranged in the form of a coil, which is so shaped as to encircle a long shower space which is hollow at its centre, and which along its length has a number of fluid discharge openings, is so arranged, thanks to the elastic capacity of the hose, as to be capable of being collapsed from an extended, so-called 'shower position' to a compact, so-called 'packed-up position', and is in particular capable of being connected to an installation intended for pulsed showering with alternately hot and cold fluid.

The invention is described below as a preferred illustrative embodiment, in conjunction with which reference is made to the accompanying drawings, of which:

Fig. 1 shows an installation proposed in accordance with the invention having a constituted shower space illustrated in a normal 'shower position';

Fig. 2 shows the shower space positioned at an angle; and

Fig. 3 shows the shower space being held in a so-called 'packed-up position'.

What is proposed in accordance with the invention is the formation by means of a hose 2, suitably consisting of a relatively rigid plastics material, of an elongated shower space 1

capable of accommodating the leg of a horse or similar parts of a body. The hose 2 is so shaped as to form a number of coils 3, 3¹, 3² etc., in rows, as may clearly be appreciated from Fig. 2, said coils 3 - 3² suitably being attached to a preferably water-tight flexible sleeve 4 positioned externally around them and essentially covering the spiral rows of hose coils 3 - 3². The attachment of the hose 2 to the sleeve 4 in such a way that the spiral rows of hose coils 3 - 3² thus constituted are retained in such a way that they are situated at a certain distance relative to one another, viewed in the direction of extension of the shower space, when the shower space 1 is so arranged as to be extended freely to its 'shower position', as shown in Figs. 1 and 2, thanks to the elastic capacity of the hose 2, is suitably achieved by means of holders 5. The holders 5 can be in the form of spring-assisted hooks attached to the sleeve by means of riveted connections 6, for example, and may suitably be in the form of a number of rows of hooks 5A which extend along the direction of extension 7 of the space and are arranged around the circumference of the space.

A number of openings 8 for the shower fluid, preferably for hot and cold water discharged alternately in the form of pulses, are arranged along the hose 2 and are directed towards the centre 1A of the space.

A coupling not shown in the drawings may, for instance, be capable of being connected to a fluid supply source, and may be attached to the constituted spiral row of hose coils, preferably at a certain distance from its two ends 3A and 3B. The hose 2 which forms the aforementioned row of hose coils should preferably be plugged at each of its free ends 3A, 3B.

A fluid supply hose 9 leading from the hose 2 and through the sleeve 4 may be capable of being connected to an installation 10 intended for shower purposes, as illustrated in Fig. 1, for example, and which may be intended to provide so-called pulsed showering with an alternating supply of hot and cold fluid. For example, the installation 10 may comprise a supply line 11 and 12 for hot and cold water respectively. Means 13 for

adjusting the desired maximum outlet temperature of the water, etc., which is drawn from the installation 10 through a hose 15 connected to the hose 9 via a coupling 14 are also provided in the installation 10. The temperature may be adjusted within the range
5 of 38-65°C, for example. Said means 13 may, for example, consist of a thermostatic mixer valve. A timing device 16 is also provided in the installation 10 so as to enable the desired interval between the pulses of hot and cold water to be set in the flow of water from the arrangement 10, and also for the periods for which
10 the water is to flow to be set.

The installation 10 is preferably powered by electricity supplied via a cable 17 capable of being connected to the mains via a plug 18, for example.

The shower space 1 described above is intended to
15 be used in the position shown in Fig. 1, in which case the hose 2 will endeavour, because of its elastic capacity, to raise the hose 2 at the same time as the sleeve 4 is extended to its maximum extended position, so that the constituted shower space 1 adopts a so-called 'shower position' in which said space 1 will permit the
20 intended parts of the body of the animal or person who is intended to use the installation for shower purposes to be enclosed effectively. If, on the other hand, it is wished to introduce or remove the parts of the body concerned into or from the space 1, then it is possible by manual means, against the effect of said
25 elastic capacity of the hose, to collapse the arrangement into a so-called 'packed-up position', as shown in Fig. 3, in which position the hose coils 3 - 3² are brought close to one another. When the space 1 is held in said 'packed-up position', which is ideally suited to the storage of the space 1, it will be possible
30 rapidly and reliably to cause the leg of a horse, for example, to be introduced into or removed from the space 1. If the grip on the upper part 1B of the space is now released, the hose 2 will endeavour to raise itself so that the space 1 again adopts its so-called 'shower position'.

35 The invention is not restricted to the arrangement described above and illustrated in the drawings, but may be modified within the scope of the following Patent Claims.

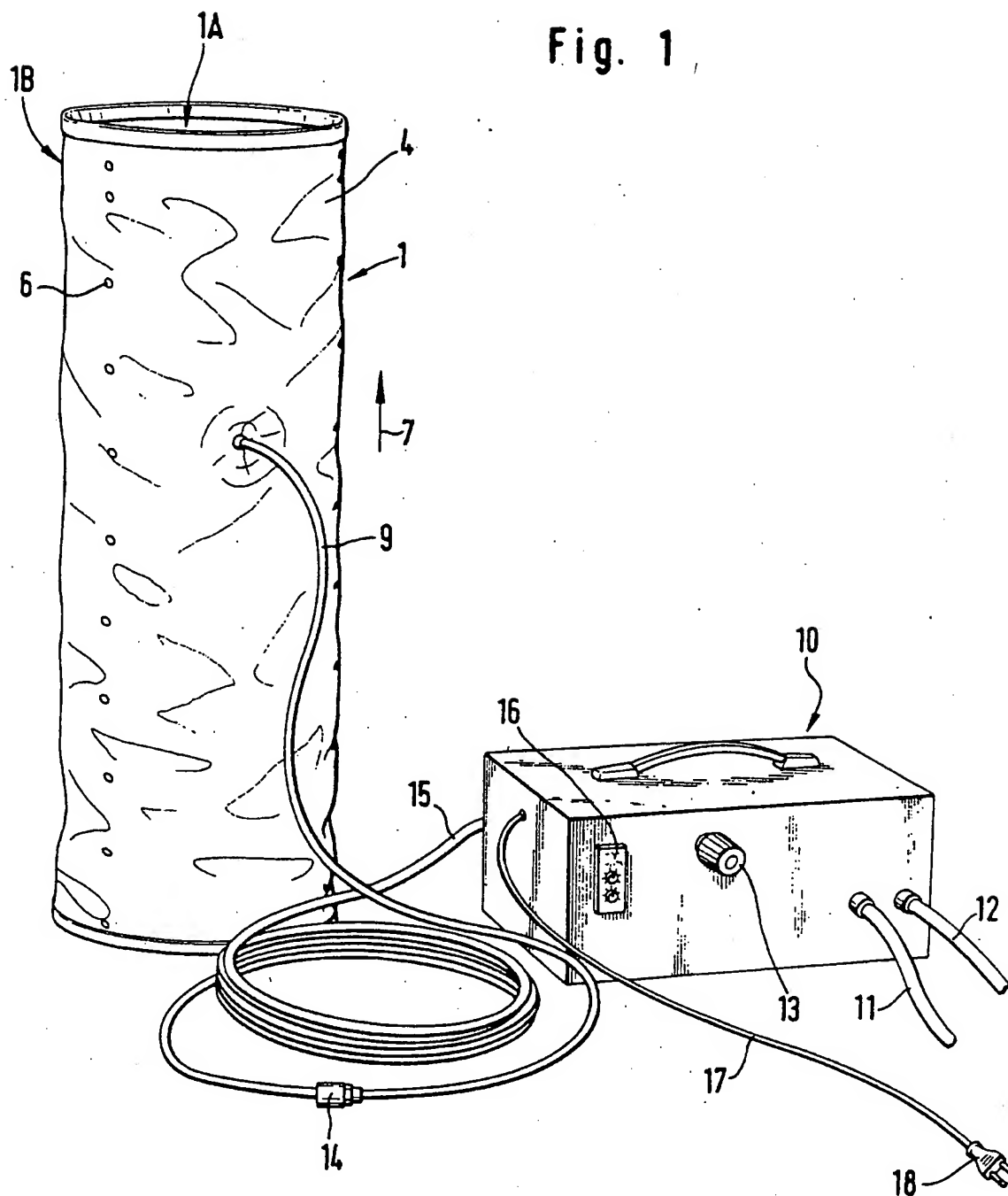
Patent Claims

1. Arrangement for a shower space (1) which forms part of an installation (10) intended for shower purposes, characterized in that a shower fluid supply hose (2) arranged in the form of a coil, which is so shaped as to encircle a long shower space (1) which is hollow at its centre, and which along its length has a number of fluid discharge openings (8), is so arranged, thanks to the elastic capacity of the hose, as to be capable of being collapsed from an extended, so-called 'shower position' (Fig. 1) to a compact, so-called 'packed-up position' (Fig. 3), and as to be capable in particular of being connected to an installation (10) intended for pulsed showering with alternately hot and cold fluid.
2. Arrangement according to Patent Claim 1, characterized in that a suitably water-tight sleeve (4) essentially covers the aforementioned, tube-like hose spiral externally.
3. Arrangement according to Patent Claim 2, characterized in that holders (5) intended to retain the hose (2) with spiral turns (3 - 3², etc.), are situated at a certain distance one from the other, viewed in the direction of extension (7) of the shower space when the shower space (1) is so arranged as to be extended freely to its 'shower position'.
4. Arrangement according to Patent Claim 3, characterized in that the holders (5) are in the form of spring-assisted hooks which are attached to the sleeve (4), for example by riveting.
5. Arrangement according to Patent Claim 4, characterized in that a number of rows of hooks (5A), which extend along the direction of extension (7) of the space, are arranged around the circumference of the space.
6. Arrangement according to any of the preceding Patent Claims, characterized in that a coupling, intended for connection to a fluid supply source, is attached to the spiral row of hose coils, preferably at a certain distance from each of its ends (3A, 3B).

7. Arrangement according to Patent Claim 6, characterized in that the hose (2) formed by the aforementioned spiral rows of hose coils is plugged at each of its free ends (3A, 3B).
- 5 8. Arrangement according to any of the preceding Patent Claims, characterized in that a number of fluid discharge openings (8) are arranged along the hose (2) and face the centre (1A) of the inner shower space formed by the encircling hose (2).
- 10 9. Arrangement according to any of the preceding Patent Claims, characterized in that the installation (10) for providing pulsed showering comprises an apparatus intended for the supply of hot and cold fluid respectively, complete with means (13) for adjusting the desired
15 maximum outlet temperature for the fluid which it is wished to draw from the installation (10).
10. Arrangement according to Patent Claim 9, characterized in that the installation (10) comprises a device (16) enabling the desired pulse interval for the fluid
20 from the apparatus to the shower hose (2) to be regulated.

1 / 3

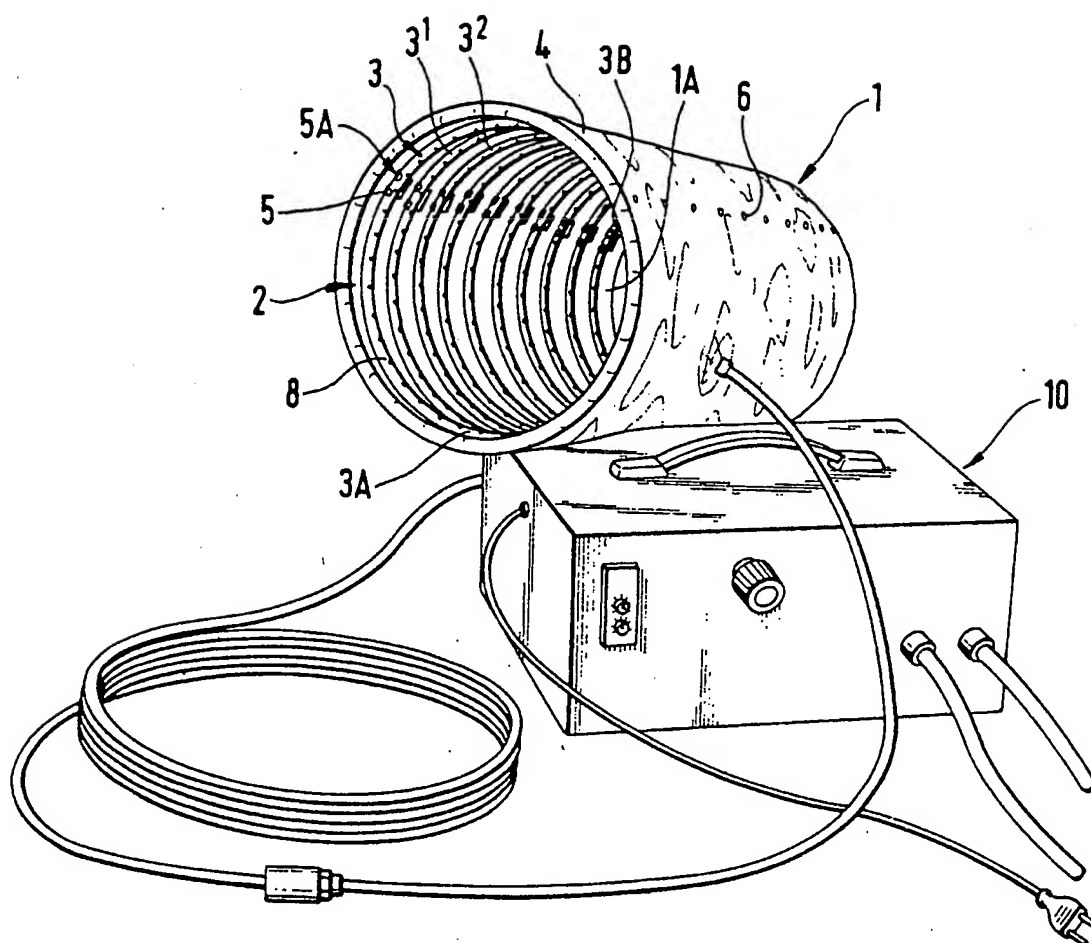
Fig. 1



SUBSTITUTE SHEET

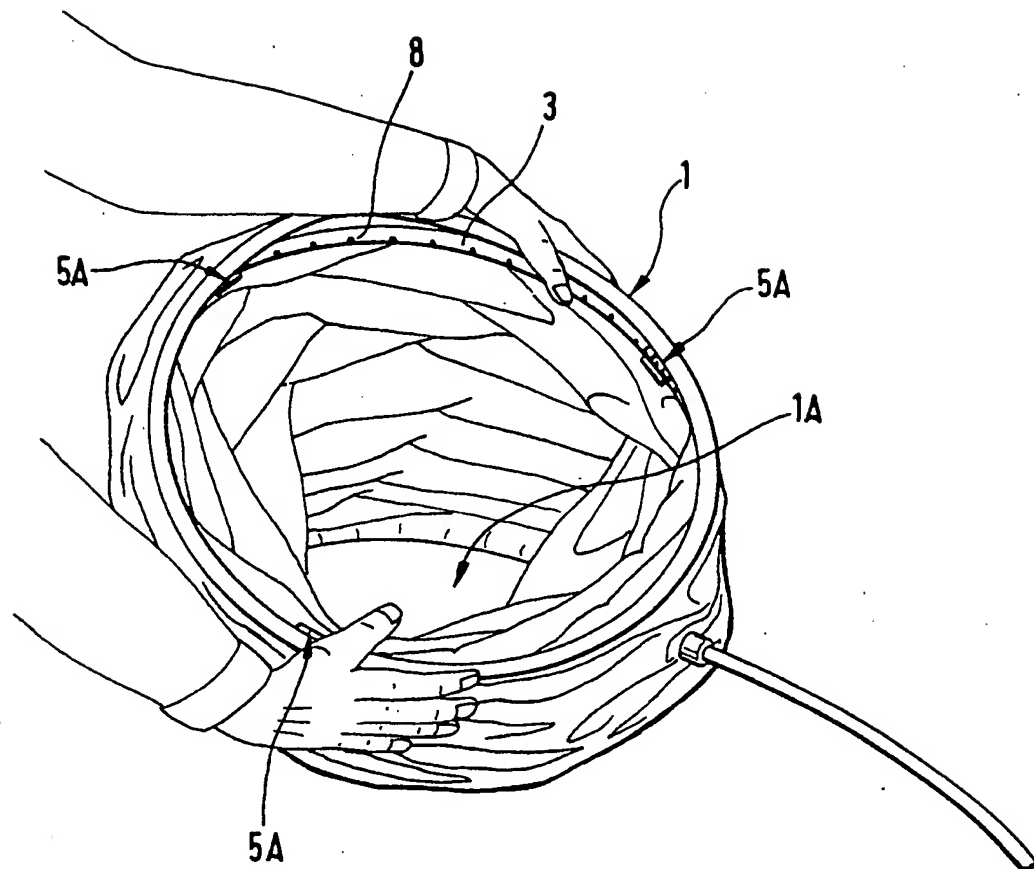
2 / 3

Fig. 2




3 / 3

Fig. 3



INTERNATIONAL SEARCH REPORT

International Application No PCT/SE85/00383

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) *		
According to International Patent Classification (IPC) or to both National Classification and IPC 4		
A 01 K 13/00, A 47 K 3/24		
II. FIELDS SEARCHED		
Minimum Documentation Searched 7		
Classification System	Classification Symbols	
IPC 4	A 01 K 13/00; A 47 K 3/23, 3/24	
US Cl	4: 145-158, 538-660; 119: 1, 158-160	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched *		
SE, NO, DK, FI classes as above		
III. DOCUMENTS CONSIDERED TO BE RELEVANT *		
Category *	Citation of Document, 11 with indication, where appropriate, of the relevant passages 12	Relevant to Claim No. 13
Y	US, A, 1 684 047 (STOVEN) 11 September 1928 page 1, line 2 and line 34-36, figures 1, 2	1
Y	US, A, 699 786 (CAMPBELL) 13 May 1902 page 1, line 58-69, figure 1	1
A	US, A, 3 155 072 (OWENS) 3 November 1964 figure 1	
A	US, A, 3 657 746 (DOWNEY) 25 April 1972 figure 1	
A	US, A, 3 749 064 (WEINSTEIN et al) 31 July 1973 figure 1	
A	US, A, 2877467 (CLOUD) 17 March 1959	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>* Special categories of cited documents: 10</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"A" document member of the same patent family</p> </div> </div>		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report	
1985-12-17	1986-01-02	
International Searching Authority	Signature of Authorized Officer	
Swedish Patent Office	 Leif Törn	